

## CLAIMS

### We Claim:

1. In a projectile having a means therein for guiding said projectile during its flight toward a selected target, said projectile further having a housing, a forward end and a longitudinal axis and rotating in a first direction about said axis, what is claimed is **a system for generating power and providing said power** to said guiding means, said power generating system residing in said projectile and comprising: a plurality of exhaust ports located on said housing to allow any exhaust gases to escape; a cylindrical hole within said projectile along said axis, said hole communicating with said exhaust ports; an air inlet located at said forward end to allow air to enter said hole; a turbine positioned within said cylindrical hole, said turbine having a plurality of vanes; an electrical generator coupled to said turbine; a means for coupling said generator to said turbine, said vanes of said turbine rotating in a second direction in response to said entered air and driving said electrical generator and causing said generator to produce voltage output, said voltage output being input to said guiding means to power said guiding means.
2. A system for generating power for a guided projectile as set forth in claim 1, wherein said system further comprises: a capacitor coupled to said generator, said capacitor performing low-pass filtering to smooth said voltage output and to store said voltage output.
3. A system for generating power as set forth in claim 2, wherein said system still further comprises a voltage regulator coupled between said capacitor and said guiding means, said regulator stabilizing said voltage being input to said guiding means.
4. A system for generating power as set forth in claim 3, wherein said second rotating direction is opposite from said first rotating direction.

5. A system for generating power as set forth in claim 4, wherein said means for coupling said generator to said turbine is a shaft therebetween, said shaft rotating in response to the rotation of said vanes.
6. A system for generating power as set forth in claim 5, wherein said system still further comprises bearings, said bearings being positioned adjacent to said shaft to render stability to said shaft as said shaft rotates.
7. In a projectile having a means therein for guiding said projectile during its flight toward a selected target, said projectile further having a housing, an aft end and a longitudinal axis and rotating during flight in a first direction about said axis, **a system for generating voltage output** to power said guiding means, said generating system residing in said projectile and comprising: a turbine positioned within said housing, said turbine having a plurality of vanes; an electrical generator coupled to said turbine; an exhaust port located at said aft end to allow any exhaust gases to escape; a plurality of inlet holes, said inlet holes being located on said housing and being positioned so as to allow air to enter therethrough and impinge on said vanes and cause said vanes to rotate in a second direction; and a means for coupling said generator to said turbine so as to enable said turbine to drive said generator and cause said generator to produce voltage output, said voltage output being input to said guiding means to power said guiding means.
8. A system for generating power for a guided projectile as set forth in claim 7, wherein said system further comprises: a capacitor coupled to said generator, said capacitor performing low-pass filtering to smooth said voltage output and to store said voltage output.
9. A system for generating power as set forth in claim 8, wherein said second rotating direction is opposite from said first rotating direction.